

The pragmatic portfolio: An assessment approach for distributed learning¹

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Abstract

Portfolios, especially where they involve some use of or link to online technologies, are currently a popular focus for learning innovation in universities, drawing on a tradition of using portfolios in some areas of higher education and attempting to extend and broaden this practice. In some cases this focus has led to ambitious plans for whole-of-institution approaches, often involving significant technological development. However, the term portfolio can also cover a wider variety of possible learning and assessment activities and there are ways of using portfolios which, while quite traditional in their own form and approach, enable teachers to approach other aspects of their curriculum and pedagogy in far more innovative ways. This paper explores the conceptual basis on which the Department of Internet Studies at Curtin University of Technology is utilising a pragmatic approach to portfolio assessment within individual units of study, so as to enable a more thorough implementation of distributed learning. In this form of learning, where students regularly contribute to their own and others' learning through short tasks and conversations, the evidence of achievement is widely distributed and not easily accessible for either formative or summative assessment. As explained in the paper, students are required to collate, select, and then contextualise a sample of these numerous productive moments of their ongoing study. The paper concludes that while other goals for portfolio assessment (such as encouraging reflection) can also be used with this approach, its primary value is in unleashing the potential of social media creativity in a manner that motivates students via the requirement of assessment, enables feedback to be provided to guide learning, and which promotes shared responsibility between teachers and students in determining the kind and extent of their learning activities.

Introduction

The paper begins with a brief discussion of what we might mean by distributed learning. In this context, it does not mean students engaged in formal higher education without attending a university campus. Rather, distributed learning refers to the fact that students achieve their learning outcomes according to individual learning patterns that are distributed across time and space largely independent of the organised formal arrangement of all students tied to classes and assessment. Distributed learning lies, therefore, somewhere between formal and informal learning. This circumstance is reinforced and also made explicit by the social adoption of the Internet, as explained in the second part of the paper. The Internet has made knowledge work a networked, computer-mediated activity – regardless of what and where it is located; learning, a subset of knowledge work, also takes on this networked, distributed form.

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Both of these circumstances mean that portfolio-based assessment take on new significance for universities. While by no means a novelty, portfolios seem to best accommodate the condition of knowledge work in contemporary society *and* also provide a mechanism by which formal educational settings can take account of the value of students' learning in a distributed manner. Thus, the paper presents a summary of the key aspects of portfolios as currently used in higher education, attempting to highlight the conceptual basis on which various specific implementations of portfolio assessment might be similar and different. These conceptual discussions of learning and portfolios are presented as the basis for the specific decisions taken in the development of new curriculum in the Internet Communications courses offered by the Department of Internet Studies at Curtin University of Technology. The final section of the paper explains how portfolios are being used in this curriculum and discuss the reasons why the approach might be seen as pragmatic.

Distributed learning: a general perspective

In one sense, all learning is distributed in that it occurs, not in a particular location, nor in a centrally organised and constrained manner, but is always embedded in the diverse rhythms of the lives of learners. This point – while obvious to those who are well grounded in theories of learning – is not, of course, as clear to those who are learners. Take, for example, the use of the 'classroom', both as a spatial technology and the language associated with it, as a venue for learning. The 'classroom', particularly for students and teachers with relatively naive understandings of education, creates the perception that, if one is not 'in class' then one cannot, should not and is not learning. Empirical evidence for this assertion can be found in the behaviour of students who regularly report that they assiduously attend class and expect to learn, in class, but do not see any reason or purpose for learning 'outside' of the classroom unless it has some particular bearing on previous or future classes. Indeed, for many students, even preparing for, or reflecting on their classroom attendance can be a challenge. And yet those students also regularly undertake a series of activities – completing assignments, chatting to others about their studies, even applying what they are learning even as they are working – which are clearly part of the overall learning experience in which they are engaged.

Therefore, it would be fair to say that learning does indeed implicitly distribute itself, especially in ways that are informal, only assessed indirectly, and which are not explicitly associated with 'being educated' in the minds of students. Yet, at the same time, learning is not formally recognised as being distributed: it is concentrated, apparently, in established patterns of student-teacher interaction, of which 'the classroom' remains the most stubbornly persistent form. No doubt this persistence serves useful purposes: after all, while educators, especially those most enthusiastic about innovation and student-centred learning, may desire to construct their students as effective, engaged and therefore successful learners, students are, in most cases, multiple subjects – they have many more attachments, identities and commitments in their lives and it is no doubt reassuring to them to be able to identify themselves only sometimes as 'learners' and use such formal devices as the classroom to enable this to happen.

Assessment serves a similar function to the classroom, creating a structure of engagement between learners and their teachers by which to highlight and create attention to learning at specific moments, for specific reasons, and not as part of an overall experience. As with the classroom, much of what goes into a particular assignment completed by a student is not visible in that formal interaction - the discussion with colleagues about how to complete it, the reading and research and writing which only leads up to the submission of a specific assessable essay, the performance of some practical task of which only a brief summary ever becomes 'assessable' directly. So, clearly,

there is much informal learning, distributed throughout the students' lives, which is prompted by, but never clearly part of, the assessment.

One of the key contemporary challenges of education is to design classroom activities such that they serve explicitly as a hub for a wider network of informal learning endeavours, all of which may come together within the walls of the class, but are not simply conducted there. Such an approach educates students about the real nature of how to learn best and motivates them to learn in this manner. It helps make explicit what, for many students, always remains a mystery: what is learning? This challenge is equally relevant for those teaching without the boundaries of the physical space, utilising the Internet and other tools of flexible learning. Indeed, it is a sign of the cultural dominance of the apparatus of the classroom as mode of engaging in education that online learning rapidly and extensively deployed class metaphors to create itself. After some two decades of online learning, indeed, the notion of the 'distributed classroom' has become central to current expectations and plans for how to achieve good learning via the Internet, evident for example in a renewed enthusiasm for synchronous audio and audio-visual computer-mediated interaction.

The same can also be said for assessment. Design of effective assessment is not easy. Assessment must combine appropriately formative and summative requirements, while also motivating students to learn by dint of the extrinsic motivation to complete and pass the test, and at the same time align with the learning outcomes which drive the whole learning process. Put simply, assessment design is complex because it involves balancing off competing imperatives: good assessment has to be authentic to educational principles, authentic to real-world, professional contexts, and yet also authentic to the life-world and expectations of students and the realities of the constrained working environment of contemporary education. Ultimately, the very best assignments – like good 'classroom' engagement – account for the fact that they serve as the centre of a network of other activities and learning opportunities that extend beyond the bounds of the visible and tangible material presented for the act of 'assessment'. For this reason, the pursuit of good assessment has often included the use of portfolios which form the primary focus of this paper, which I discuss below.

Ultimately then, distributed learning defines learning in such a manner that successful achievement of education is not primarily dependent on formal interactions between students and teachers at specified times and places where all learners come together in a particular way. The classroom, the most significant spatial marker of undistributed learning, and the assignment – the most significant temporal marker – do not thereby become unimportant. Rather, in developing our approaches so as to make distributed learning explicit, classes and assessment change from being designed specifically for those times and places and instead become hubs which clearly relate to activities and engagements outside of themselves but which only make sense in light of the persistently necessary formalities of assessment and classes. Distributed learning only works – in a formal education system – when it is also recognised that concentrations of learners and learning also matter. The relationship between the two is what makes education work.

Distributed learning: a network technology perspective

Distributed learning does not require the Internet, nor is it necessarily made better because of the Internet. Of course, distance education has improved significantly, in the hands of good practitioners because computer-mediated communications have enabled teachers and students to reduce, in various ways, the transactional distance between themselves, even while remaining physically and temporally apart. But, to be blunt, the Internet has also hampered the development of good distance education when it is assumed the technology itself (rather than the affordances which

the Internet provides, exploited by good techniques of online teaching) can solve the apparent problems of the remote, isolated student, unable to be co-present with other learners. Moreover, early exploitation of the Internet for formally distributed learning (meaning, for students who did not concentrate themselves on campus in the traditional way) occurred early in the historical development of the networked, mediated society and was often an effective intervention precisely because of the novelty and difference of learning online from the more general condition of *living* online which has now become part and parcel of most advanced societies.

We can sense something of this contradiction now in the way that the Internet is complicating the business of on-campus learning: the productive consequences of having a concentrated grouping of students in common places and times are now far harder to achieve because of the flexibility afforded by Internet-enabled blended learning. While clearly making education more accessible and flexible, blended learning runs the risk of taking the least productive aspects of distance education and substituting them for the most productive parts of on-campus education. The conclusion I draw from this, however, is not that blended learning thereby is inappropriate: rather, I wish to assert that the fact students now regularly engage with learning in a more distributed manner, regardless of their physical location, suggests that the Internet is affecting education because of its pervasive social presence, rather than because of any inherent educational applications which the network might afford.

The relationship between distributed learning and the Internet is, therefore, to be found in the broader circumstances of knowledge in a networked society and not in the specific uses of the Internet for flexible, blended, or distance education. As I have argued elsewhere, learning is a particular form of knowledge work; now, because of the widespread adoption of the Internet, across all manner of social and cultural activities, knowledge work itself is changing character and thus the nature of learning will also change, and is changing. The specific aspect of this change on which I wish to focus today is that, with so much knowledge work now being mediated by networked computing, distributed and informal learning activities using the network are more visible, persistent and potentially public than ever before. As a result, we begin to see one possible answer to the fundamental challenge of effectively and reliably combining the valuable, but often hard-to-connect distributed learning endeavours of students, with those which occur in more formal settings. Put simply, networked knowledge work enables students to retain a more useful and useable record of that which happens ‘outside’ of the class and the formal assessment. The products of this knowledge work then become the mechanism by which direct and explicit links can be made between the formal hubs of learning, which require concentrations of students in a common place, or through a particular common assignment, and diffuse, individual learning actions.

So, knowledge work is changing, and gives students the capacity to create more accessible records or, or results from, learning occurring outside the norms of formal classes and assignments. This capacity is particularly important in discipline areas involving the Internet, such as Internet Communications, but more generally communications and media, creative arts and so on. In this disciplinary cluster, the capacity for distributed learning to be aligned with distributed, network knowledge work becomes a requirement. The skills and abilities students need for success after graduation compel us to adopt in teaching and learning the means and mechanisms of knowledge networking. Moreover, knowledge networking becomes the authentic context within which learning occurs: distributed learning is unlikely to occur away from the network in disciplines such as Internet Communications; moreover any attempt to explicitly mobilise students’ distributed learning without utilising the Internet is unlikely to succeed.

The challenge, of course, remains that, as discussed above, distributed learning – whether involving the Internet or not – is by definition ‘outside’ of the formal patterns of engagement between students and teachers. It is distributed precisely because it is unique to each student,

distributed according to their individual engagement, in time and space, with the subject matter, in the contexts which make learning matter for them. The Internet, while promoting forms of knowledge work which make this kind of learning even more relevant for educators when planning and designing learning experiences, does not alone thereby make it more amenable to the linking with formal moments of education. For very practical reasons – including the fact that formal education is a mass system, involving large numbers of students, small numbers of teachers, and constraints on the means by which the two can interact – the visible traces of distributed learning which networked knowledge work produces still need to be transported in some manner from their distributed state, into the concentrated world of the formal system of classes and assessment. The portfolio – particularly the pragmatic portfolio which I will discuss – serves as the mechanism by which this transportation can occur.

Portfolios and higher education: a summary

To understand exactly what is meant by portfolios in this context, and to ensure appropriate emphasis is placed on the particular, pragmatic form we are employing in the Department of Internet Studies, let me now provide a general background on portfolios in higher education. Of course, portfolio assessment is hardly new. Moreover, in the guise of e-portfolios there has been a recent upsurge in interest in this approach to how students might present or provide an ‘output’ from their studies. But there is confusion or, at least, multiplicity in the understandings of portfolios which can be read in educational literature on their use in higher education. Before outlining the way we are approaching this kind of assessment, let me summarise for you the three main varieties, so as to make clear exactly what we are attempting.

One very important understanding of portfolios is as a component of reflective practice, as a complement to a kind of regular and on-going reflection on learning. In this approach the portfolio can be best understood as a collection of examples and evidence of the ‘actions’ of learning upon which reflection is occurring; in many cases, the portfolio is seen – quite literally – as the appendix to the reflection. Certainly important, it is however, secondary to the reflection – representing that which is reflected upon, and acting as the dialogic partner in the silent conversations of reflection. If such portfolios are assessed, it is the reflection not the action which forms the primary basis for judgment. Yet, predominantly, the audience for this kind of portfolio is the learner themselves: it is portfolio as mirror.

The most recent, and perhaps most normative understanding of portfolios is a little different: as in Curtin’s e-portfolio project, I-Portfolios, portfolios here become a presentation of the self, normally extending across an entire course of study and involving a variety of inputs largely controlled by the students themselves. While potentially capable of assessment (perhaps in capstone units), or of being linked to assessment (via the inclusion within this portfolio of assignments), largely, this kind of portfolio is not assessed and is an enlarged and enriched curriculum vitae: it is a promotional exercise that, while having pedagogic potential, is primarily understood as being a portrait of the student, painted and displayed to demonstrate competence and employability.

Both of these dominant understandings draw on the third, and I think original, understanding of the portfolio within education. This conception was (and still is) found largely in the creative and visual practices and disciplines – art, design, architecture and so on. The portfolio is, here, less of an educational concept and more one relating to the very business of being a creative practitioner, whether apprentice, journeyman or master. Portfolios are used for entry to courses, assessment during courses, entry into professions, and the effective practising of that art because of the capacity

of portfolios to enable reflection. These are portfolios which ideally are so much a part of the being of art, design and the like, that they are simply an extension of the practitioner.

In other words, while portfolios are commonly (and increasingly) used, they are actually used in some profoundly different ways, depending on the traditions of the disciplines in which they are deployed, the educational objectives to be fulfilled, and so on. This difference is defined by, firstly, the *audience* for the portfolio and the relationship of its producer to that audience (e.g. prospective employee relating to employers in the portfolio-as-portrait. Secondly, portfolios differ depending on the relationship between the specific items within them and the supervening totality which the portfolio constitutes (e.g. in a portfolio-as-mirror, the items serve as prompts for and evidence to sustain reflection, with that reflection - whether in the portfolio itself or external to it - being the totality which determines the meaning of the inclusions).

And yet, each has something in common. All portfolios involve assessment, though the term assessment here is something broader than just grading, of course. It can include the judgments made of a person's employability, one's own judgment of performance after reflection, as well as an academic assessment for grading. Equally, all portfolios presume that the value in a form of presentation for assessment that explicitly presents the many diverse 'parts' that make up the whole, rather than simply the whole itself. If, in contrast, an examination or essay or class presentation is judged primarily in terms of its unity and coherence (often because of what is *omitted*), a portfolio is judged in large measure by the diversity and multiplicity. A portfolio is always a work in progress, both in the sense that it is never complete, but also because it makes explicit the pathway of progression of its owner or producer.

Therefore, I would argue that a portfolio, when used as part of assessment within education, attempts to do two things at once. Portfolios take material evidence of learning directly from the distributed and inaccessible world of each individual student and process it such that it is then amenable to the kind of formal interactions between students and teachers required for assessment. While many other forms of assessment seek confirmation of the learning outcomes for students which could not be achieved without informal and distributed learning and thus attempt indirectly to access this learning world, portfolios make a direct and obvious link between the two. It is why they are, on the one hand, highly effective and intense learning experiences when handled correctly. At the same time, by dissolving the boundary between formal and informal, concentrated and distributed, systemic and personal, portfolios create considerable anxiety and uncertainty for students whose deeply held assumptions about learning involve clear separation of what they do as *learners* and what they do as *students*.

Internet Communications: why pragmatic portfolios?

In our new Internet Communications units, we have a pragmatic approach to portfolios which emerges from the reasoning outlined at the start of this paper. They are part of our attempt to create a more explicit link between the formal structures of education and the realities of dispersed and distributed learning and thus more successfully direct the latter, while letting them positively influence the former. In other words, we want students to realise that their learning does not occur solely in the structured communicative interactions with teachers and other students in the online equivalents of 'classes' nor does it occur solely in preparing and submitting the formal assignments. This desire on our part could perhaps be realised simply by telling students that this approach was important, but experience has suggested that there are two major impediments. First, many students - especially early in their university studies - have no guidance as to what the relationship might be; even while they implicitly learn in a distributed way, their focus is too insistently on the formal and structured, and not on their own learning capabilities. Second, students receive contradictory

messages about how to organise their studies – how to prioritise and time what they do – from the instructions that create the formal learning context which concentrates them on regular weekly interactions and the key dates for assignment submission. Thus, students do not reliably know how to distribute their learning across time and space, in different contexts, so as to create an accumulation of learning experiences all of which add up to achievement of the overall outcomes; moreover, requirements to submit assignments at specific times cues them to focus only at those times, and not continually.

Therefore, our units of study, especially at earlier levels of difficulty, are designed so that students are guided *into* a more distributed style of learning and are cued to its importance by making that learning part of the formal assessment structure. The portfolio plays a major role in achieving these two design outcomes, firstly by giving students clear instructions of specific, limited tasks to be performed and then providing them with an assignment which compiles the results of those tasks into a format that can be readily assessed. In other words, while attempting to link concentrated and distributed learning, we use the conventions of the former (instructions, tasks, assessment) to motivate and value students' performance in the latter. Indeed, the portfolio, being a formal assignment that gives ready, if partial, access to the learning world of the student enables us to use feedback, that most significant formal educational, to demonstrate the importance of what students are doing. By allowing us to give feedback on what students are doing to learn, rather than on how well they are doing, this portfolio approach becomes critical in guiding the development of a learning attitude, not just learning outcomes.

When students move from first-year units into later-year studies in the program, the level of task-based instruction declines which they are given declines and there is increasing emphasis on self-directed and organised distributed learning. Importantly, given that students can take a while to adjust to a model of education which is designed around the relationship of their individual and dispersed learning and the hubs of formal contact and communication, this staged approach enables us to introduce aspects of the overall portfolio approach in a staged manner. In particular, while it is commonplace to presume that portfolios must or should include reflection (so as to make them more than just a collection of examples which might evidence completion, but not learning), we have found that the reflective aspect is challenging for new students, already coming to grips with a requirement to make available to teachers material which they have often never had to submit for assessment before.

We also use portfolios to accommodate the fact that we are educating people to become sophisticated professional workers within a networked knowledge society. Such workers need to be proficient at, and comfortable with, many discrete, dispersed acts of Internet content creation. Examples include: finding, tagging and organising resources; utilising cognitive tools such as mind maps and word clouds; posting comments to blogs and responding to them; adding to knowledge databases; rating, reviewing, and ranking content; creating online content in public forums. Not only do these approaches to knowledge work teach them about the way the Internet works as a media and communications environment, but also ensure that – even when learning other knowledge and skills – they are operating in an authentic manner given the context of their studies. The portfolio becomes a collation of the evidence and outputs of these activities, presented as a single assignment, with more or less reflective commentary depending on the nature of the unit and the tasks set. It values student endeavour in concentrating on some of the most valuable aspects of their learning experience, which – but for the portfolio – would be very hard to assess.

So, essentially, Internet Communications' approach to portfolios works with elements of all three categories outlined above (portfolio as mirror; portrait; and self). Portfolios here are not, in many ways different. They involve students responding to both formal instructions and informal, personally identified opportunities, to create throughout a semester's study readily accessible

evidence of their own activities in engaging with their learning. These activities can include conversations with other people (including other students), tasks using websites that enable production of some output of cognitive work (mind-mapping for example), and tasks involving the sharing of ideas and knowledge in formal ways with the Internet at large (blogging, for example). The evidence is then collated, a selection made (with some guidance), and then students contextualise this sample, so as to give a 'singular' assessable presentation of these numerous productive moments of their ongoing study. As explained above, the goal here is not just or primarily reflection, nor presentation of self, nor even embodying oneself in the work presented. Rather, combining all three elements, portfolios serve simply as a container, a box constituted by the formal requirements of education which mediates between the often-disjoint worlds of distributed and concentrated learning.

This approach achieves the following goals when one is dealing with the initial requirement to complete knowledge work in fragments, rather than as a whole.

- It links the performance of distinct, small learning tasks to assessment, on the assumption that assessment motivates performance and attention to task, both communicating to the student the value of the work, and allowing them to make decisions about effort and engagement based on that communication.
- It makes possible the equitable, intersubjective assessment of diverse students' performance (while all do different things, they present them in a similar, constrained format), as well as creating a formal communication of task and result between student and teacher to enable feedback.

In simple terms, most traditional assignment forms – essays, exams, reports etc – don't completely reflect the nature of contemporary knowledge work. They remain important, but must be complemented by an assignment approach that promotes and motivates students to do much more 'task' work, but which still remains equitable and efficiently assessable. Of course, such an approach then also enables portfolios to include the reflective element most commonly associated with them. The challenge is to formulate the overall assessment in such a way as to make clear to students to dual nature of their work. While initial research shows a very strong enthusiasm from students for this approach, our current techniques are failing to give clarity about this duality.

The difficulties that we have encountered in implementing our approach in 2009 – and which have led us to develop revisions for 2010 and beyond – reveal to us the key conceptual challenge which makes portfolios of this kind both productive and potentially difficult. The audience for each component part that goes into the portfolio is defined by the original mode of production: a student's lengthy comment on a public blog has a primary audience of that blog's author (and other readers); a student's discussion in an online forum with other students has a primary audience of those students; notes written about a student's reflection on their Internet experiences are aimed, primarily, at the student themselves. Yet, once combined and collated – even with some kind of contextualisation – the audience of these components *changes* to be the assessor of the portfolio. As a result, contradictions arise which can lead students to become more focused on negotiating this change in context than on successfully completing their learning. Yet, without this change in audience, there would not be assessment: thus, while difficult, we have come to understand how portfolios - like many other assignments - are best implemented only when they explicitly engage students in thinking about who they are communicating with.

While this paper has addressed, in a modest way, some complex conceptualisations of the learning process and how best to activate students' engagement with their learning in different settings, it remains the case that portfolios, as used in Internet Communications, are still pragmatic in their orientation. This pragmatism is best understood by summarising some key goals of our overall approach to assessment.

First, portfolios were implemented to enable us to divide up the work of students into many more precise, smaller and manageable tasks. To ensure these tasks were valued and students motivated to complete them, they had to be assessed in some manner, but we did not wish to impose the significant burden on all concerned of assessing each one, time and again. Thus a portfolio was the pragmatic solution: while conceptually sustainable, the decision to use portfolios simply allowed us to take several small tasks, below the threshold for direct assessment, and turn them into a single assessable item. Second, learning involving diverse evidence and activities – often located in many places on the Internet or presented originally in forms that would not easily link to the student who produced it – would be far too complex to assess directly, if it were not first collated and presented in a manner and form that could be easily uploaded to the learning management system, accessed and assessed simply by one of several tutors, and then returned promptly to the student with feedback. In other words, while the Internet makes much distributed learning more visible and retrievable, it still does not (and will not) make that easily assessable by hard-pressed, short-term tutors. Thirdly, while recognising the theoretical validity of all-encompassing portfolio systems which might promise technological ease in such situations, Internet Communications – already engaging with web-based services and applications in many different ways – was focused principally on reducing the technical complexity of the actual completion and presentation of the portfolio, so as not to unduly interfere with its primary goals as outlined.

Conclusion: social media and the future of portfolios

Ultimately portfolios in Internet Communications are a means of achieving two goals at once. First, the goal is to help students develop an approach to learning that is both distributed, verging on the informal, and at the same time concentrated, based on formal events and requirements. Some students explicitly use this approach; others do it implicitly, but imperfectly; perhaps some do not realise it at all and rarely think about their studies except in a very formal way. This help is provided not just by being demanding, or advising, but by formally linking these two domains of learning via the portfolio which captures elements of distributed learning but presents them as if a formal assignment. Second, the portfolio serves as the only practicable way, given the constraints on student and staff time, to permit students to do networked knowledge work in social media - the authentic mode of learning in this discipline – and still be able to value that work through assessment, provide feedback, and make it central to the students' experience. These two goals both depend on the particular conditions of knowledge and learning in contemporary society, however, so as not just limited to disciplines involving creative online media and communications. With appropriate adaptation and attention to the particular requirements of other areas of study and education, it would seem likely that the portfolio – when properly conceptualised as a complex form of dual presentation, involving multiple audiences and a shifting interrelationship between its parts and its whole. Curiously, the more that we tried to simplify the portfolio and make it pragmatic, the more that these conceptual tensions continued to appear, suggesting that no teaching and learning approach can ever escape the fundamental difficulties which it is attempting to solve!

